

**REMARKS**

The final Office Action mailed October 19, 2009, has been received and carefully considered. Independent claims 9 and 13 have been amended to define the invention with greater particularity. To the best of the undersigned attorney's information and belief, these changes contain no new matter for the reasons given in the remarks which follow.

Applicants respectfully draw the Examiner's attention to an inconsistency in the Office Action and respectfully request correction of the record at the Examiner's earliest convenience. The Office Action Summary incorrectly indicates that claims 5-16 are pending and that claims 5-8 are withdrawn. Page 2 of the Office Action correctly acknowledges that Applicants cancelled claims 5-8 in the last response. Thus, the Office Action Summary should show that claims 9-16 are pending .

**Claims 9-16 are pending in the Application and are submitted to be in allowable condition. Claims 9 and 13 are independent.**

**Claim Changes and Support**

Independent blue color filter claims 9 and 13 have been amended to recite, "*wherein the first colorant and the second colorant are completely dissolved in the binder resin*".

Support for these changes is found in the paragraph after Table 1 on page 13 of the Application as-filed, the fourth and last sentence, which states, "*On the other hand, with the color filters of the examples, it is thought that the contrast exhibits a high value because the colorants are completely dissolved in the binder and hence the transparency is high.*"

**1.The rejection of claims 9-16 under 35 U.S.C. §103(a) as unpatentably obvious over Kobayashi (GB 2,349,388) in view of Nambe (US 5,506,357) is respectfully traversed.**

**2.The rejection of claims 9, 11, 13, and 15 under 35 U.S.C. §103(a) as unpatentably obvious over Kobayashi (GB 2,349,388) in view of Tang et al. (US 4,769,292) is respectfully traversed.**

Remarks Distinguishing Over the Prior Art

1. Applicants note that the primary reference, Kobayashi et al., is Applicants' earlier Application that was brought to the U.S. Examiner's attention in an Information Disclosure Statement filed June 15, 2007. Clearly Applicants consider that the present invention is novel, useful, and unobvious over Applicants' prior disclosure for the reasons given in the following.

2. The Examiner points out that Kobayashi et al. discloses a blue color filter containing a first colorant (see page 5, the "first cyanine dye" of formula (1) with a  $\text{ClO}_4^-$  anion), a binder resin (see page 7, paragraph 1, "photosensitive resin"), and a second colorant (see page 6, the "second cyanine dye" of formula (2)).

3. The Examiner acknowledges that that the second colorant of Kobayashi et al. differs from that of Applicants' formula (2) in two respects. First, the Examiner acknowledges that Kobayashi et al. disclose only alky substitution in the Y-position while the Y-position of Applicants' formula (2) is occupied by a sulfur atom (claim 9) or an oxygen atom (claim 13). Second, the Examiner acknowledges that Kobayashi et al. does not disclose any anion for the second colorant of formula (2).

4. The Examiner therefore relies on the disclosure of Nambe where structures (4) and (5) represent cyanine dyes with a sulfur atom at the Y-position. The Examiner has not mentioned structures in Nambe where cyanine dyes with an oxygen atom at the Y-position, but it appears that Nambe does disclose such structures (see, for example, claim 1, Col. 41, line 30, and Col. 43, line 30). The Examiner additionally relies on the disclosure of Nambe Col. 4, lines 7-8, for coupling cyanine dyes with anions.

5. The Examiner justifies the combination of Kobayashi et al. and Nambe on pages 4 and 5 of the Action as a mere substitution of one cyanine dye for another with a reasonable expectation of success. The Examiner acknowledges that the disclosure of Nambe is in a different field of endeavor because the use of the dye is different, but argues that a chemist would look for analogous dye structures using a structure search.

6. Moreover, the Examiner considers that newly applied Tang et al. teach cyanine dyes that read on Applicants' formula (3) which were likewise known at the time of the present invention and used in electroluminescent devices.

7. The Examiner justifies the modification of Kobayashi et al. with the cyanine dyes of Tang et al. in the discussion bridging pages 8 and 9 of the Action page 5 of the Action on a basis similar to that for the combination of Kobayashi et al. and Nambe. The Examiner considers that it would be obvious to an artisan in the electroluminescent art to select from known cyanine dyes used in electroluminescent devices.

8. Applicants respectfully disagree that the combined disclosures of Kobayashi et al. and Nambe or the combined disclosures of Kobayashi et al. and Tang et al. set out *prima facie* cases of obviousness. In the alternative, Applicants believe that any *prima facie* cases of obviousness that may be deemed to exist are rebutted by the comparative test results presented on page 9-13 of the Application.

9. In order to define the present invention with greater particularity, Applicants have amended independent claims 9 and 13 to be commensurate in scope with the comparative test results presented in the Application as-filed. Claims 9 and 13 now recite, "*wherein the first colorant and the second colorant are completely dissolved in the binder resin*".

10. The paragraph following Table 1 on page 13 of the Application discusses the significance of the comparative test results presented in the Application on pages 9-13 and summarized in Table 1.

*"As shown in table 1, in the case of forming the films so as to have the same optical transmissivity at 470 nm, the optical transmissivity at 510 nm is higher for the examples than for the comparative example. This means that the light-blocking ability in a wavelength region that would lower the purity of the blue color is higher for the color filters of the examples than for the color filters of the comparative examples. Moreover, with the color filters of the comparative example in which a pigment was dispersed in a binder, scattering is prone to occurring in the color filters and at interfaces. On the other hand, with the color filters of the examples, it is thought that the contrast exhibits a high value because the colorants are completely dissolved in the binder and hence the transparency is high."*

11. It is Applicants' position that the blue color filters of the present invention and the organic EL devices including the same have an advantageously high contrast value that results from the colorants being dissolved in the binder resin so that Applicants consider that

independent claims 9 and 13 clearly distinguish over the combined references.

12. While Kobayashi et al., page 1, lines 1-2, teach a blue color filter that includes a dye or pigment, Applicants found no disclosure in Kobayashi et al. of using colorants for blue color filters that are dissolved in the binder resin. For example, Kobayashi et al. page 8, lines 1 and 2, disclose use of the first cyanine dye of formula (1) as a dispersed pigment. Kobayashi et al. describe the first and second embodiments (see Kobayashi et al. pages 13 and 17-18, respectively) as made by spin coating a commercially-available photo-polymerizing resin containing a cyanine dye of formula (1) for the first embodiment and formulas (1) and (2) for the second embodiment, but Kobayashi et al. is **not** seen to teach using colorants for blue color filters that are dissolved in the binder resin or to suggest that an advantageously high contrast value would result from the colorants being dissolved in the binder resin rather than being or including dispersed pigment(s). The disclosures of Nambe and Tang et al. are not seen to teach or suggest this feature and therefore do not supply the disclosure missing from Kobayashi et al.

13. Additionally and/or alternately, it is Applicants' position that the blue color filters of the present invention and the organic EL devices including the same have been demonstrated in Applicants' comparative test results presented in the Application to have an unexpected result, i.e., a high contrast value that results from the colorants being dissolved in the binder resin, sufficient to rebut any prima facie case of obviousness that may be deemed to exist.

14. In view of the foregoing distinctions and comments, Applicants respectfully submit that no *prima facie* case of obviousness has been made out regarding independent claims 9 and 13, and dependent claims 10-12 and 14-16 for analogous reasons, so that these grounds of rejection should be withdrawn. Additionally and/or alternative, Applicants respectfully submit that any *prima facie* cases of obviousness that may be deemed to exist has been rebutted by the comparative test results presented in the Application so that these grounds of rejection of independent claims 9 and 13, and dependent claims 10-12 and 14-16 for analogous reasons, should be withdrawn.

## **CONCLUSION**

In view of the foregoing amendments and remarks, Applicants submit that claims 9-16 and the Application are in condition for allowance. Reconsideration and passage of this case to

issue are therefore requested.

Should the Examiner consider that a conference would help to expedite the prosecution of this Application, the Examiner is invited to contact the undersigned to arrange for such an interview.

Other than the \$810.00 fee accompanying the filing of A Request For Continued Examination, no other fee is believed due. This fee is submitted herewith in the attached credit card form PTO-2038. Should the remittance be accidentally missing or insufficient, the Commissioner is hereby authorized to charge the fee to our Deposit Account No. 18-0002 and is requested to advise us accordingly.

Respectfully submitted,



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Date

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Steven M. Rabin. (Reg. No. 29, 102)  
Rabin and Berdo PC  
CUSTOMER NO. 23995  
1101 - 14th Street, N.W., Suite 500  
Washington, D.C. 20005  
Tel.: (202) 371-8976  
Fax: (202) 408-0924

SMR/AJW:ac